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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,207	04/16/2004	Randall E. Messick	100203807-1	7669

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HEWLETT PACKARD COMPANY
P O BOX 272400, 3404 E. HARMONY ROAD
INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER	
HOFFLER, RAHEEM	
ART UNIT	**PAPER NUMBER**
2165	

NOTIFICATION DATE	DELIVERY MODE
12/27/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JERRY.SHORMA@HP.COM
mkraft@hp.com
ipa.mail@hp.com

Office Action Summary	Application No.	Applicant(s)	
	10/825,207	MESSICK, RANDALL E.	
	Examiner	Art Unit	
	Raheem Hoffler	2165	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 September 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Action

In view of the Appeal Brief filed on 04/19/2007, PROSECUTION IS HEREBY REOPENED.

New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

CHRISTIAN CHACE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 13-20 and 28-32 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 13-20 appear to be directed to a "system" defined solely by its functionality. Paragraph 57 of the instant specification notes the functionality being performed by software, and therefore the "system" may be software alone, as the claims themselves do not require any hardware. Claims 28-32 directed to a system comprising software per se. Software per se is not one of the four categories of invention. Software per se is not a series of steps or acts and thus is not a process. Software per se is not a physical article or object and as such is not a machine or manufacture. Software per se is not a combination of substances and thus, is not a composition of matter. Therefore, claims 28-32 are non-statutory, also citing paragraph 57 within the specification.

"Data structures not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer. See, e.g., Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory.

Similarly, computer programs claimed as computer listings per se, i.e., the descriptions or expressions of the programs, are not physical "things." They are neither computer components nor

statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer which permit the computer program's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035."

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 9 and 28-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The clause, "the action steps to correct the problem" at claim 9, references to at least two "action steps", e.g., one in the step of identifying and another one in the step of performing. It is unclear which "action steps" is being referenced.

Claims 28-32 are vague and indefinite because the steps in the body of the claim recite the limitation of "means for..." which has been reasonably construed an the attempt by Applicant to invoke 35 U.S.C. 112, sixth paragraph. However, the metes and bounds of the claim have not been specifically defined for the limitation of "means for..." in the specification. The instant disclosure does not defined the structures necessary for each "means for 35 U.S.C. 112, sixth paragraph states that a claim limitation expressed in means-plus-function language "shall be construed to cover the

corresponding structure...described in the specification and equivalents thereof." "If one employs means plus function language in a claim, one must set forth in the specification an adequate disclosure showing what is meant by that language. If an applicant fails to set forth an adequate disclosure, the applicant has in effect failed to particularly point out and distinctly claim the invention as required by the second paragraph of section 112." In re Donaldson Co., 16 F.3d 1189, 1195, 29 USPQ2d 1845, 1850 (Fed. Cir. 1994) (in banc). (See MPEP 2181 [R-2]). "As noted supra with respect to the rejections under 35 USC 101, the "means" disclosed in the instant specification may be interpreted as software alone, as disclosed in paragraph 57 of the instant specification. However, software alone is not a "means" as it cannot, by itself, provide any functionality."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Numanoi et al (USPG Pub No. 20030220899A1; Numanoi hereinafter) in view of Ledru et al (USPG Pub No. 20040162843A1; Ledru hereinafter).

As for Claim 1, Numanoi teaches a method for managing a storage area network (SAN)" (see paragraph [0009], [0021]), comprising:

"receiving an alert related to a state of a device coupled to the SAN" (paragraph [0023], "alert related to a state of a device coupled to the SAN", e.g., information concerning the use situations of the storages for example use capacities of the storage, the number of I/O operations of disk is collected);

"parsing the alert to identify the state of the device" (see paragraph [0024], the collected information is analyzed "to identify the state of the device", e.g., prediction values of the use capacity predicted after one week), comprising:

"determining a problem category" (see paragraph [0024], e.g., prediction values of the use capacity predicted after one week),

"and determining action options" (see paragraph [0025-0026], when the prediction values satisfy a predetermined condition, the system can establish the policy prescribing how the system cope therewith, e.g., if the prediction value of the use capacity of the disk device exceeds 100%, data is moved to another disk device), "comprising consulting an action rules database"(see FIG. 4, ACTION BOX 403, paragraphs [0047-0057], "action rules database", e.g., ACTION 403, is consulted to determine an action options);

"identifying an action required to correct a problem associated with the alert in response to the identified state of the device" (see FIG. 4, paragraph [0057], "action required to correct a problem associated with the alert", e.g., data is moved to another disk device, is identified by selecting the action in ACTION BOX 403);

"automatically performing the action to correct the problem without approval from an operator of the SAN" (see paragraph [0047-0056], "the action", e.g., data is moved to another disk device, is executed when the object satisfies the condition "to correct the problem", e.g., the use capacity of the disk device exceeds 100%. ACTION BOX 403 does not need "approval from an operator of the SAN").

The missing of Numanoi is the step of "identifying a notification message, wherein the notification message provides information related to the state of the device".

As disclosed by Ledru at FIG. 4, paragraphs [0037-0040], "a notification message", e.g., email, could be identified, wherein "the notification message provides information related to the state of the device", e.g., the severities of the device in box 410.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the email technique as taught by Ledru into Numanoi method in order notify an operator when the severity of the device is above a threshold.

As for Claim 2, Numanoi teaches, "the SAN" (see paragraph [0009], [0021]), but fails to explicitly recite, "identifying the operator to receive the notification message". Ledru explicitly recites the limitation of "identifying the operator of to receive the notification message" (see paragraph [0007], [0028-0032]; whereas Ledru teachings of a "notification contract" instantly identifies the user or operator of a device and abides by his/her specific instructions on how to proceed afterwards, equivalent to Applicant's teachings of identifying an operator).

As for Claim 3, Ledru teaches, "sending the notification message to the operator" (see paragraph [0028]).

As for Claim 4, Ledru teaches, "waiting on a response message from the operator, wherein the response message directs performance of one or more action steps"; "and directing execution of the action steps" (see paragraph [0007], [0028-0032]).

As for Claim 5, Numanoi teaches, "one or more suggested action steps for execution" (see paragraph [0048-0056]), but fails to explicitly recite, "the information in the notification message". Ledru explicitly recites the limitation of "the notification message" (see paragraph [0034], [0038]).

As for Claim 6, Numanoi teaches, "providing the operator with specific actions required to correct the problem" (see paragraph [0031], [0034], [0043] & [0048-0056]).

As for Claim 7, Numanoi teaches, "the information includes a report of automatic action steps completed" (see Fig. 5; see paragraph [0058]).

As for Claim 8, Ledru teaches, "the notification message is one of an e-mail message, a voice message and a voice-to-text message" (see paragraph [0034], [0038]).

As for Claim 9, Numanoi teaches, "A method for managing a storage area network (SAN) (see paragraph [0009], [0021]), comprising:

"receiving alerts from a management server, "monitoring states of devices coupled to the SAN"; "receiving an alert when a state of a device indicates a problem" (see paragraph [0024-0025], [0029-0031]);

"identifying a device subject to the alert"; "identifying action steps for correcting the problem"; "automatically performing the action steps to correct the problem (see paragraph [0024], e.g., prediction values of the use capacity predicted after one week).

The missing of Numanoi is the step of "a message processor and sending notification messages to operators"; "when an operator is not required to make a decision for correcting the problem"; "and sending the action steps to correct the problem to the operator when the operator is required to make a decision for correcting the problem".

As disclosed by Ledru at FIG. 4, paragraphs [0037-0040], "a notification message", e.g., email, could be identified, wherein "the notification message provides information related to the state of the device", e.g., the severities of the device in box 410.; when an operator is not required to make a decision for correcting the problem" (see paragraph [0028-0032]; e.g. notification contract);

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the email technique as taught by Ledru into Numanoi method in order notify an operator when the severity of the device is above a threshold.

As for Claim 10, Numanoi teaches, "determining if the action steps for correcting the problem are required to be one of (1) performed by a server and (2) performed by the operator" (see paragraph [0007], [0028-0032]; whereas Ledru teachings of a "notification contract" instantly identifies the user or operator of a device and abides by his/her specific instructions on how to proceed afterwards, equivalent to Applicant's teachings of identifying an operator).

As for Claim 11, Numanoi teaches, "identifying action steps comprises: determining if action is required; identifying the action to correct the problem; and determining if the action is automatically performed by a management server" (see paragraph [0023-0024], [0031-0032], [0034] & [0043]).

As for Claim 12, Numanoi teaches, "if the action is automatic, initiating the action" (see paragraph [0031], [0034], [0043]).

As for Claim 13, Numanoi teaches, "managing a storage area network (SAN), comprising:

a management server that monitors states of devices coupled to the SAN (see paragraph [0025]) and sends alert messages based on the states" (see paragraph [0030-0031]),

"a receiver that receives the alert messages, a parser that analyzes the received alert messages" (see paragraph [0023-0024]),

and an action rules database that specifies possible corrective actions for correcting a problem associated with the alert, wherein the parser consults the database to select one or more of the corrective actions" (see paragraph [0023-0024], [0030-0034], [0048-0056]).

The missing of Numanoi is the step of "a message processor", "notification messages", and "a formatter/addresser that formats and addresses the notification messages".

Ledru explicitly recites, "a message processor", sending notification messages" (see paragraph [0028-0032], [0034], [0038]), and "a formatter/addresser that formats and addresses the notification messages (see Fig. 3-4; see paragraph [0028]; e.g. "user interface"), and a transmitter that sends the notification messages to messaging devices" (see paragraph [0034], [0038]);

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the email technique as taught by Ledru into Numanoi method in order notify an operator when the severity of the device is above a threshold.

As for Claim 14, Numanoi teaches, "file parser consults the database and uses a state of a device to determine action options" (see paragraph [0023-0024], [0031], [0033-0034], [0043]; whereas Numanoi teachings of agents performing the function of checking the status of the devices and reporting to a variety of different units, such as the condition judgment unit and the action execution unit).

As for Claim 15, Numanoi teaches, "the possible corrective actions include actions to be initiated automatically (see paragraph [0031], [0034], [0048-0056]; whereas Applicant's teachings of actions to be initiated automatically is equivalent to Numanoi teachings of a list of actions and the action execution unit); but fails to explicitly recite a "message processor". Ledru explicitly recites the limitation of a "message processor" (see Fig. 3-4; see paragraph [0028-0032]; whereas Applicant's teachings of a message processor is equivalent to Ledru teachings of a monitoring application).

As for Claim 16, Numanoi teaches, "possible corrective actions include action options requiring approval of a system administrator (see paragraph [0031], [0034], [0043] & [0048-0056]). Numanoi fails to explicitly recite, "receiving a notification message, and wherein the notification message includes the action options". Ledru explicitly recite, "receiving a notification message, and wherein the notification message includes the action options" (see paragraph [0007], [0028-0032], [0054]).

As for Claim 17, Ledru teaches, "the formatter/addresser formats the alert messages for receipt by one or more of a Web browser, a mobile phone, and a telephone" (see Fig. 3-4; see paragraph [0028]; e.g. "user interface").

As for Claim 18, Numanoi teaches, "the management server initiates automatic corrective action based on a monitored state of a device (see paragraph [0025], [0029], [0034] & [0043]), but fails to explicitly recite, "a notification message indicates the action taken by the

management server". Ledru explicitly recites, "a notification message indicates the action taken by the management server" (see paragraph [0028], [0048], [054]).

As for Claim 19, Ledru teaches, "the alert messages are e-mail messages" (see paragraph [0034], [0038]).

Claims 21-27 differ from Claims 1-7 in that claims 21-27 computer readable medium whereas claims 1-7 are method claims. Thus, claims 21-27 are analyzed as previously discussed with respect to claims 1-7 above.

Claims 28-32 differ from Claims 13-17 in that claims 28-32 message-based system claims dependent on base claim 28 whereas claims 13-17 are message-based system claims dependent on base claim 13. Thus, claims 28-32 are analyzed as previously discussed with respect to claims 13-17 above.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Numanoi et al (USPG Pub No. 20030220899A1; Numanoi hereinafter) in view of Ledru et al (USPG Pub No. 20040162843A1; Ledru hereinafter) further in view of Primm et al (US Patent No. 7095321B2; Primm hereinafter)

As for Claim 20, Numanoi teaches SAN management and Ledru teaches an alert and notification system. Both Numanoi and Ledru fail to explicitly recite, "a lightweight directory access protocol (LDAP) database". Primm teaches, "a lightweight directory access protocol (LDAP)" (see col. 4, lines 11-15).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined a lightweight directory access protocol (LDAP) database taught by Primm with the alert and notification system of Ledru and the SAN management taught by Numanoi because an improved method and system for sensor monitoring, alert processing, and notification would be desirable.

Response to Arguments

Applicant's arguments with respect to claims 1-32 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of reference and not relied upon is considered pertinent to Applicant's disclosure.

Tonack et al (USPG Pub No. 20030163489A1) teaches maintenance request systems and methods.

Marejka et al (USPG Pub No. 20030135639A1) teaches a system monitoring service using throttle mechanisms to manage data loads and timing.

Ford et al (USPG Pub No. 20050010093A1) teaches formulation and manipulation of databases of analyte and associated values.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raheem Hoffler whose telephone number is (571) 270-1036. The examiner can normally be reached on 7:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffery Gaffin can be reached on (571) 272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RH

Raheem Hoffler

/HPham/

CHRISTIAN CHACE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100